Score for Everson, Kathryn

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Very Good

Explanation to Applicant

The applicant has an excellent academic record. The applicant has an excellent record for planning and carrying out research. The evidence for this comes from completing an honors thesis that was derived from an international partnership between Ohio State University and the University of Sao Paulo. The applicants proposed research is an excellent integrative study that uses a model system of adaptive radiation of Tenrec species on Madagascar. The integration of niche modeling in parallel with the phylogenetic analysis of next generation sequence data makes this an exciting applicant to support. Enthusiasm for this application would be greater if a manuscript was published rather than in preparation, although the applicant should be commended for pushing to get work published.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Very Good

Explanation to Applicant

The applicant will pursue a career as a museum curator. The applicant has strong motivation for this career based on living near a museum with inaccurate information. The applicants vision of integrating research in a museum environment is excellent. The applicant has had a variety of very good outreach activities as an undergraduate. These activities provide confidence that the applicant will continue outreach activities such as involving undergraduates in research.

Score for Everson, Kathryn

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Excellent

Explanation to Applicant

The applicant has demonstrated ability to plan and conduct research through the research proposal herein and through the prior research conducted. Involvement in campus scientific clubs and travel as well as learning different languages show the ability and desire to communicate science to others. Presentations at meetings demonstrate ability to interpret and communicate research results to peers

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

The applicants research in Madagascar on speciation will have impact on management and conservation programs and the integration of local people into the research will promote the spread of knowledge to the local non technical public. The overall effect of this project will be to benefit local society in Madagascar and to promote knowledge of biodiversity in the world

Score for Everson, Kathryn

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Very Good

Explanation to Applicant

The applicant has a strong undergraduate record, including extensive research experiences in multiple labs. This previous research experience has resulted in in-house presentations at the undergraduate institution, and in a manuscript in preparation.

The applicant proposes to combine next-generation sequencing and ecological niche modeling approaches to investigate the evolution of tenrecs in Madagascar. The proposed research is promising, but needs further development. For example, several of the stated hypotheses are not scientific hypotheses per se (i.e., Hyp 4, which states that previously undescribed species should be discovered, is not actually a hypothesis). This proposal proposes to describe existing patterns of diversity in Madagascar, but does not set out a series of testable questions that might be answered with the data obtained.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Very Good

Explanation to Applicant

The applicant's proposed research concerns the evolution of tenrecs, a group of mammals endemic to Madagascar. Madagascar has one of the most unique and threatened faunas in the world, making almost any work conducted there relevant to conservation biology.

The applicant has conduct outreach with several organizations, such as an entomology club, and has presented to groups including K-12 students and Girl Scout troops. As part of the proposed research, the applicant plans to include undergraduates in the research, and to have undergraduates work to compile species accounts that would be made available to the public.